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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of
Carl A. Reiser
Serial No. 10/765,737
Filed: January 27, 2004
Title: Internal PEM Fuel Cell Water Management

Docket: C-3363
Art Unit: 1795
Examiner: O'Neill, Karie Amber

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Carl Reiser declare that:

1. I reside at 25 Orchard Street, #19, Stonington, CT 06378.

2. I have a Bachelor of Science degree in Mechanical Engineering and have been working in the field of fuel cells and related arts for over 40 years, and am currently engaged in that field on behalf of UTC Power Corporation, South Windsor, CT.

3. I have familiarized myself with the matter claimed in the subject application, and with the relevant contents of de Vaal et al US 6,815,101 (de Vaal).

4. de Vaal's hydrogen sensor S5 is located at the opposite end of the stack from the purge valve 70 – see right end of Fig. 6 (S5) and Fig. 5 (bracket 741), and column 10, lines 62-64 (10:62-64); one-third from left end of Figs. 5 and 6 (purge valve 70); the purge valve 70 is ducted to the cooling airflow (11:27-29), within which airflow S5 is located.

5. In de Vaal, the hydrogen concentration is monitored in the environment of the fuel cell, including air, in which oxygen is also monitored – see 1:46-49 (column 1, lines 46-49); 2:5; 3:40-43; 4:7-13; 10:14-25; 11:9-13; and 11:27-29.

6. The purpose of monitoring the hydrogen concentration is to assure remaining safely (1%) below the lower flammability limit of hydrogen (4%) – see 2:52-54; 3:27-32; 55-61; 13:28-34, 35-37, 61-64; 18:6, 8, 45, 46, 51, 52, 54, 55; and 19:22-26.

7. de Vaal seeks to avoid an excess of hydrogen whereas the subject claims relate to avoiding a dearth of hydrogen – see 2:49-52; 3:48-54; 8:33-38; and 17:2-5.

8. de Vaal senses hydrogen not only vented by the purge valve 70 from the fuel flow fields, but also from leaks - see 11:16, 17, 31, 39; and 14:11.

9. de Vaal suggests at 14:7-12, monitoring oxygen concentration as a backup to monitoring hydrogen.

10. From the facts set forth in paragraphs 5 and 8 hereinbefore, it is clear that de Vaal does not disclose monitoring any parameter from fuel flow fields, but rather monitors an environment that includes cooling air and gas from leaks.

11. de Vaal does not disclose monitoring any flow whatsoever.

12. de Vaal does not disclose monitoring of hydrogen unadulterated by air.

13. All statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Carl Reiser

Carl Reiser

2/18/08

Date